

## **REMARKS**

Claims 24-38, as amended, are pending in the present application. Claims 24 and 33 have been amended according to the suggestions provided by the Examiner in the Office Action. In particular, claim 24 has been amended to recite that the biologically active material is "particulate" in order to provide antecedent basis for the term "the average particle size". Also, claims 24 and 33 have been amended to recite "the at least one opening" to provide antecedent basis. No new matter has been added by these amendments.

### **I. OBJECTIONS TO THE DRAWINGS**

The Examiner has objected to the drawings of Figures 8-11 for failing to show any significant or discernable structure. Submitted herewith in Tab A are formal drawings of Figures 8-11 in response to the Examiner's objection. It is respectfully requested that the Examiner's objection to the drawings be withdrawn, and the formal drawings be accepted and entered into the file of the application.

### **II. CLAIM OBJECTIONS**

The Examiner has objected to claims 24 and 33 as lacking antecedent basis. More specifically, the Examiner states in the Office Action that the term "the average particle size" in claim 24 lacks antecedent basis. As the Examiner has suggested, claim 24 has been amended to recite "particulate" after the term "a polymeric material incorporating". Therefore, it is believed that this objection has been overcome.

Furthermore, the Examiner objected to claims 24 and 33 as lacking clear antecedent basis for the term "the opening". As the Examiner has suggested, claims 24 and 33 have been amended to recite "the at least one opening". Thus, it is believed that the objection to claims 24 and 33 has been overcome.

### **III. CLAIM REJECTIONS UNDER 35 U.S.C. § 112**

The Examiner has rejected claims 24-38 under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, the Examiner has objected to the terms "about 4-6  $\mu\text{m}$ " or "about 4  $\mu\text{m}$ " because the specification allegedly fails to provide some standard for measuring that degree to which "about" modifies the claim scope.

Applicant respectfully disagrees with the Examiner. Relative terminology in claim language does not render the claim indefinite, so long as one of ordinary skill in the art would

understand what is claimed in light of the specification and state of the art. MPEP 2173.05(b). One of ordinary skill would understand how to measure the particle size of a particulate material. Also, one of ordinary skill in the art, in light of the specification, would know that "an average particle size about 4-6  $\mu\text{m}$ " means, that the average particle size of the particles of biologically active material such as a drug should not exceed approximately 6  $\mu\text{m}$  or fall below approximately 4  $\mu\text{m}$  so that the initial rate of drug release of "burst effect" would exceed the desired rate (Specification at page 20, lines 24-27). Therefore, this rejection should be withdrawn.

#### **IV. CLAIM REJECTIONS UNDER 35 U.S.C. § 103**

The Examiner has rejected claims 24-33 and 35-37 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,716,981 to Hunter *et al.* ("Hunter *et al.*"). Applicants respectfully submit that Hunter *et al.* does not render the present invention unpatentable because it does not teach or suggest the claimed invention

Claims 24-33 and 35-37 are directed to an implantable medical prosthesis having at least one opening in which at least a portion of the prosthesis is covered by a coating. The coating comprises a polymeric material, which incorporates a biologically active material with an average particle size of about 4-6  $\mu\text{m}$ . The coating also adheringly conforms to the prosthesis so as to preserve the opening when the prosthesis is expanded.

Hunter *et al.* discloses an anti-angiogenic composition which comprises an anti-angiogenic factor and a polymeric carrier. (Col. 12, lines 23-25). Contrary to the Examiner's statement on page 4 of the Office Action, Hunter *et al.* does not disclose or suggest that the biologically active material or anti-angiogenic drug has an average particle size of about 4-6  $\mu\text{m}$ .

More specifically, the Examiner alleges that column 17, lines 27-40 of Hunter teaches a biologically active material having a particle size of 0.1 to 3 $\mu\text{m}$ . Contrary to the Examiner's allegation, this portion of Hunter only discloses microspheres that may include an angiogenic factor and that the microspheres, not the angiogenic factor, can have sizes ranging from 0.1 to 3 $\mu\text{m}$ . However, Hunter does not disclose or suggest whatsoever that the angiogenic factor has these particle sizes or any particle size. In fact, Hunter does not even disclose or suggest that the angiogenic factor is in particulate form.

Because Hunter fails to disclose whether the angiogenic factor in the microspheres has a certain particle size or that the angiogenic factor is even in particulate form, Hunter fails to teach or suggest the present invention. In particular, when a biologically active material, such as a drug, is combined with a polymeric material to form microspheres or other objects in which the polymeric material incorporates the biologically active material, under certain conditions and parameters, the biologically active material and polymeric material can exist in a solid solution. If such a solid solution is formed the biologically active material does not exist in particulate form and therefore does not have an average particle size. Furthermore, under other conditions and parameters, when a biologically active material and a polymeric material are combined, the biologically active material can precipitate to form particles having a certain average particle size. The average particle size can vary greatly depending upon various conditions and parameters.

In other words, whether a biologically active material when combined with a polymeric material forms a solid solution or precipitates to particles of a certain average particle size depends on a number of parameters. Such parameters include the types of biologically active material and polymeric material used, the solubility of these materials, the type of solvent used to combine the biologically active material and polymeric material as well as how these constituents are mechanically combined. Therefore, Hunter's mere disclosure that an angiogenic factor is combined with a polymer to form microspheres would not apprise one of ordinary skill in the art whether the angiogenic factor exists as particles in the polymeric material and even if such angiogenic factor did exist as particles, what the average particle size of the angiogenic factor is. Accordingly, Hunter's disclosure of microspheres of certain sizes fails to teach or disclose a coating comprising a polymeric material incorporating a biologically active material having an average particle size of about 4 to 6  $\mu\text{m}$ .

In addition, the Examiner has rejected claims 34 and 38 under 35 U.S.C. § 103(a) as being unpatentable over Hunter in view of U.S. Patent No. 5,591,227 issued to Dinh et al. ("Dinh et al."). As explained above Hunter does not anticipate the claimed invention; moreover, Dinh et. al. does not remedy Hunter's deficiencies. Dinh et al. discloses a drug eluting fibrin stent which has a polymer coating-layer and a fibrin top-layer (Col. 2, lines 36 - 56). Similarly to Hunter, Dinh does not disclose a method for making a drug release coating wherein, drug particles of 4-6  $\mu\text{m}$  are introduced into a polymer coating. Dinh also does not teach, introducing a drug in a particulate form. Furthermore, Dinh does not disclose, teach or even mention particle sizes.

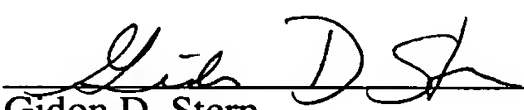
**CONCLUSION**

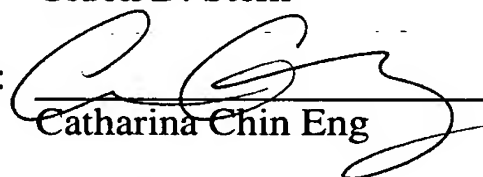
As all rejections are believed to be overcome, all claims are believed to be in condition for allowance. An early notice to that effect would be appreciated. Should the Examiner not agree with Applicants' position, then a personal or telephonic interview is respectfully requested to discuss any remaining issues and expedite the eventual allowance of the application.

No fee is believed to be due for this amendment. Should any fee be due, please charge the required fee to Jones Day Deposit Account No. 50-3013.

Respectfully submitted,

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For:  27,469  
Gidon D. Stern (Reg. No.)

By:  42,412  
Catharina Chin Eng (Reg. No.)

**JONES DAY**  
222 East 41st Street  
New York, New York 10017  
(212) 326-3939

*Enclosures*